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I.

TAPPING IN HYDROCEPHALUS.

Mrs. CHAUNCEY, a colored woman, was delivered, on the 26th of September, of a male child. Dr. J. Sickles, who attended her, observed that the head of the child was unusually large, and, on examination, he found that it labored under congenital hydrocephalus.

Nov. 12.—Head measures nineteen inches in circumference, and thirteen from one mastoid process to the other. The parietal bones are separated from each other between six and seven inches.

Nov. 24.—Head measures twenty inches and a half.

Dec. 5.—Head measures twenty-one inches and three quarters.

Dec. 11.—Head measures twenty-two and a half inches, and fifteen from one mastoid process to the other. One pupil is contracted, and the other dilated, with twitching of the muscles, and tossing of the arms.

Dec. 21.—In the presence of Dr. R. K. Hoffman, and Dr. J. Sickles, I made a puncture with a common bleeding lancet, in the posterior fontanelle, about one inch and a half from the centre, on the right side, and drew off about twelve ounces of fluid. The child rested much better this afternoon, than on any previous day.

Dec. 22.—Child appears much

better—less strabismus. It now, for the first time, appears to observe the light of a candle; bowels very regular; rests and nurses well.

Dec. 23.—In the presence of Dr. B. Kissam and Dr. J. Sickles, I drew off thirty ounces of clear fluid. During the flow of the last ten ounces, I was obliged to stop it two or three times, in consequence of the debility produced; but reaction soon came on, and I continued the discharge as far as was considered safe.

Dec. 24.—Considerable fever.

Dec. 25.—Pupils contracted; cough; difficult breathing. At four o'clock on the next morning, the child died. The parents would not allow of any examination. I would not have performed this operation, but for the hopeless state of the case, and the earnest solicitations of the parents; and as I had heard and read of cases favorable to the practice, I thought it only fair to give my patient a chance.

After quoting the above case, the Editor of the N. Y. Bulletin goes on to say:—

I shall embrace the opportunity given by Dr. M'Comb's case, and offer a few remarks on the disease which forms the subject-matter of his communication. These I shall arrange under four heads, viz:—

1st. *The brain is not disorganized in hydrocephalus.*

2d. *If the brain were destroyed, the manifestations of the mind would be annihilated.*

3d. *The measurements of some of the largest heads on record.*

4th. *Observations on tapping the brain.*

1st. *The brain is not disorganized in hydrocephalus.*—It was such cases as the above, that led the ancient physicians, and even some of those not far distant from our own day, to assert, that some infants, and even adults, existed for years without a brain. Zacutus Lusitanus says he knew a child to live for three years without a brain; for, on examination after death, he found water occupying the place of the brain, and the dura mater folded or doubled on itself. Lauffer found nothing in the head of a stillborn child but water, in which he conjectured the brain had been dissolved. (*Dissertatio de infante sine Cerebro nato*, Hallæ, 1743.) Haller mentions the statement of Duverney, which amounts to this:—That in a hydrocephalic subject examined by him, there was no brain. However, without a denial is necessary to show his disbelief, he cannot be accused of fostering the absurd narration of Duverney. Morgagni criticised Duverney with that candor and severe acumen which ever marked his commentaries on predecessors and contemporaries;—to be short, he never failed in such cases in finding the brain, but it universally assumed more or less a membranous form. This cerebral transformation had, however, been previously noticed by Vesalius. (*Opera Omnia*, 1, p. 16.) Tulpus, (*Observat Med.*, 8vo. 1716, p. 45.) Petit, (*Memoires de l'Academie Royale de Sciences*, 1718.) Hunauld, (*Memoires de l'Academie Royale*,

1740.) Bertin, (*Osteology*, tom. ii., p. 500.) and Vater, (*Miscellanea Curiosa sive Ephemeridum Medico-physicarum Germanicarum Academiae-Cesareo-Leopoldinae Naturæ Curiosorum*, Decuria, iii., A. 9, p. 294.) We are however under lasting obligations to Gall and Spurzheim, for incontrovertible anatomical and physiological proofs, that the cerebral substance is not disorganized in hydrocephalic subjects. By laborious, cautious, and multiplied lacerations of the brain, they have clearly demonstrated, beyond all cavil, that each cerebral convolution is composed of two closely applied laminae, and consequently, that when the ventricles are distended with fluid, the surrounding convolutions suffering a pressure in the ratio of its accumulation, have their component layers separated, and changed gradually from their natural or vertical position, so as in time to assume a horizontal position. Thus the brain really becomes unfolded, and presents the appearance, in extreme cases, so honestly described by Zacutus Lusitanus. Had Duverney and Lauffer the sagacity of Vesalius, Tulpus, and Morgagni, or the light of Gall and Spurzheim's discoveries in cerebral anatomy, to regulate their dissections, they would have discovered, *that the brain had not been dissolved, nor vanished from the sight of man*; and, above all, they would have avoided the sarcastic criticisms of their *petit* successors.

2d. *If the brain were disorganized, the manifestations of the mind would be annihilated.*—The hypostatic union of the two entities, body and mind, is admitted by philosophers, moralists, and divines. St. Thomas, (*Contra Gentiles*.) St. Augustine, (*de lib. arbit.*) St.

Ambrose, (de operibus Christi.) St. Cyprian, (De Offic.) St. Crisostom, (Homil. ii. iii. super Epist. ad Heb.) and St. Gregorius Nyssenus, (De hominis opificio,) have advocated the connexion between the mind and the body.

Sir I. Newton says, "are not the sensible species of things, brought through the nerves to the brain, that they may be perceived by the mind present in that place?"

Locke observes, "Perceptions can only be produced by impressions upon our senses, and some motion thence continued by our nerves to the brain, or the seat of perception."

Dr. Watts thus expresses himself:—"It may be proper to observe, that there is a particular portion of the body which may be called the common sensory or palace of the soul."

I presume it is here unnecessary to prove that the opinions of the ancients respecting the seat of the mind, is untenable; of Aristotle, who placed the sentient soul in the heart; of Serveto, in the aqueduct of Sylvius; of Erasistratus, in the membranes; of Herophilus, Sylvius, Aurantius, Vieusseus, Willis, Des Cartes, Bentekoe, Schellhammer, and Drelincourt, who assigned to it a habitation in some one part of the encephalic mass.

That the cerebral mass is that part of the body through which the mind manifests itself, is easily proved by the following facts:—1st. Automatic life requires neither brain nor cerebellum. 2d. All parts of the body pertaining to vegetative life, may be destroyed without suddenly annihilating the mental faculties. 3d. If the brain be compressed or destroyed, its functions are deranged or annihilated. 4th. Animals are intelligent

in proportion to the relative size of the brain, and in the same ratio as its parts are multiplied. 5th. When the brain is imperfectly developed, as in idiots, the mind is defective. 6th. The intellectual faculties are weakened by age, and deranged by sickness, in the same ratio as the brain is changed; and, lastly, the manifestations of the mind are secondary to the growth of the brain. On this subject Dr. Watts observes: "The only reason why we see so little evidence of thinking in infants, is not for want of speech, or signs to manifest thought; but because their experience is so small, their judgment so weak, and the memory so short and imperfect, by reason of the exceeding softness of the brain, which can hardly retain any traces. As the brain grows harder, and more capable of retaining traces, so the memory is confirmed and the judgment strengthened, and taught to act, and the efforts of thinking and a reasonable nature appear." Denham, in his *Physico-Theology*, says, "The brain is in all probability the seat of the immaterial soul, and differs from that of quadrupeds, as it is larger, affording more room for so noble a guest."

If, then, the brain be the instrument by which the mind exercises its powers during its mortal affinity, it necessarily follows, that if it be destroyed by chronic hydrocephalus, the manifestations of the mind ought to be annihilated also. Walter, of Berlin, and Ackerman, of Heidelberg, admitted this position, and, in confirmation of it, have asserted that the cerebral mass is disorganized; and Walter has actually endeavored to maintain, that in this malady the faculties of the mind are destroyed. We cannot assent to

this statement; for Tulpus, Camper, Gall, Spurzheim, Home, and a host of others, have observed extreme cases of hydrocephalus, where the brightest gems of the mind shone in unsullied splendor. I myself have seen a case, and for aught I know the person still lives, where the head measured thirty-five inches at its greatest circumference, and the boy, then nine years old, possessed as much intelligence as others of age, and was endowed with a serenity of temper seldom met with in youths.

3d. *The measurement of some of the largest heads on record.*—The case related by Dr. M'Comb, is the most extensive, for the age of the child, that I have seen or read of. Dr. Monro says, "I have met with an instance of a child that died when sixteen weeks old, whose head measured, at its greatest circumference, twenty-four inches," (*Morbid Anatomy of the Brain*, p. 29.) In a person who labored under the disease for twenty-six years, he found the head to measure forty-three inches, (p. 20.) At Copenhagen, Drs. Gall and Spurzheim saw a girl of thirteen years of age, whose head measured twenty-five inches in circumference, nineteen from ear to ear, and the same from the root of the nose to the neck. At Augsburgh, they met with a girl, whose head may have contained four pounds of fluid. In London, Spurzheim examined a hydrocephalic head thirty-three inches in circumference, twenty-four and a half from one ear to another, and twenty-three and a half from the root of the nose to the nape of the neck. Messrs. Naumeyer and Nuffer, at Fribourg, in Brisgau, possess the skull of a girl aged seven years, whose brain contained seventy ounces of water.

Dr. Maler, of Carlsruhe, observed a case, where ten pounds of fluid had accumulated in the brain. (Gall and Spurzheim, *Anatom. et Physiolog. du systeme nerveux en general et du cerveau en particulier.*) Cook reports the case of a child eleven years of age, whose head measured thirty-five inches. (Ed. of Morgagni, p. 20.) Some other extraordinary cases are recorded, by Michaelis, Genga, Wepfer, and others; and, according to Cook, the head has been found to contain twenty-four pints of fluid.

4th. *Observations on tapping the brain.*—Severinus recommended puncture of the brain in hydrocephalus, when other remedies proved useless. E. Ferdinandus, Wepfer, Hildanus, and Monro, secundus, have seen the most dreadful symptoms, and even death, follow this operation. Dr. Vose, of Liverpool, has related a case, very favorable to this practice (*Medico-Chirurgical Transactions*, vol. ix. part 2); but after the operation had been repeated several times, and the bones began to unite, the symptoms increased, and soon proved fatal. Rossi, a surgeon of Turin, reports the case of a patient, aged twelve years, who had much fluid effused into the cavities of the brain, in consequence of a blow on the head. He says, "J'y fis une ouverture avec la lancette, et je tarai par là environ six livres d'eau; à reprises dans l'espace de vingt jours le malade fut sauvé."

In the *London Medical Gazette* for April last, it is reported that Dr. Conduit operated on two cases successfully. From the account there given, it appears to me, that in one case the child was only relieved; for it is admitted that the enlargement of the head did not subside. In the other, portions of

brain are said to have been discharged, and that in a few days the child had recovered. I must candidly confess that I am not credulous enough to believe this ; and I think it would be desirable to hear more about the patients of Rossi and Conduit, before we stamp them as successful.

I conceive there are serious objections to puncturing the brain with lancets and such instruments, and also to the evacuation of large quantities of fluid ; but it is not my intention, at present, to enter into an explanation of these objections—suffice it to say, that the consequences of such practice are generally fatal : moreover, wounds of the brain, even of small magnitude, generally produce delirium, vomiting and convulsions.

The fluid, in hydrocephalus, is sometimes outside the brain. This fact was formerly denied by Gall and Spurzheim ; but afterwards they retracted their opinion, in consequence of having observed cases where the fluid was collected between the brain and dura mater. Spurzheim, in his *Observations sur la Phrenologie*, speaks of a case that he examined with Dr. Robertson, of Paris, in which two pounds and a half of fluid were collected between the dura mater and arachnoid membrane, whilst the brain, covered with an adventitious membrane, lay compressed at the base of the cranium. Breschet has observed two similar cases ; and in the head of James Cardinal, aged thirty-five, who died in Guy's Hospital in 1825, Messrs. Key and Morgan, surgeons to that hospital, discovered nine pints of water between the brain and dura mater, and nearly a pint in the lateral ventricles. In the year 1824, I examined, with the late Professor

Todd, of Dublin, a female, aged ten years, who had four pints of fluid accumulated between the arachnoid membrane and the dura mater. In this case, as in that of Robertson, Key, and those of Breschet, the brain lay at the base of the skull.

In such cases as these, puncture of the brain might be attended with advantages, and this was admitted by *Monro secundus* ; but the difficulty rests in the fact, that we cannot *a priori* ascertain the situation of the water.

I have myself treated two cases by puncture, with a large cataract needle, never evacuating more than three or four ounces of fluid at a time, and then using pressure to prevent delirium. I operated on one patient seventeen times, and on the other four : in neither was the practice successful, but in both it always afforded relief. Therefore, I believe that we ought merely to view puncture as a palliative means, and, when we practise it, use a cataract needle or some other such instrument—to evacuate but a small quantity of the fluid at a time, and then make pressure in proportion to the quantity drawn off.

Where the size of a hydrocephalic head renders parturition difficult, it becomes desirable to diminish the mass by pressure.

II.

CASE OF PULMONARY DISEASE
THREATENING PHTHISIS, RELIEVED BY THE SUPERVENTION
OF COLICA PICTONUM, IN CONSEQUENCE OF DRINKING CIDER
IMPREGNATED WITH LEAD.

By JOHN E. BUSH, M.D., of Cincinnati.

I THINK it unnecessary to offer any apology for laying the report

of the following case before the medical public, when I recollect that it relates to a disease which humbles the pride of the physician, and generally mocks his best efforts; when I reflect that, in most instances, all that can be done is to palliate the disease, alleviate the patient's sufferings, smooth the way to, and soften the bed of death. Whatever is calculated to throw any light upon a subject so replete with interest, cannot fail to elicit the attention of every friend of the medical profession, and call forth his most earnest investigation.

The disease alluded to, is Pulmonary Consumption; a disease mostly uncompromising in its characteristics, and irresistible in its progress. Dr. Young says it carries off, prematurely, one fourth of the inhabitants of Europe; and M. Baillie will not admit that a genuine case is ever recovered from: at all events, it has been the terror of physicians and the scourge of mankind, from the time of Hippocrates to the present day.

The subject of the following case is Mr. B——, aged about 26 years, with light blue eyes, thick lips, long neck, sound white teeth, lax fibre, a baker by occupation, temperate as relates to drinking, but careless of his constitution, and somewhat free in his habits in other respects; has lived an athletic life from childhood. On the night of the 22d of February, 1829, his house caught fire, and, extinguishing it, his bedroom and bed became very damp, or even wet. He slept in the bed without changing the bed-clothes, in consequence of which he took a violent cold, attended with much cough, slight pain in his breast, and copious expectoration. This continued, with some slight abatement as the warm weather approached,

until the 11th of August, when he attended a camp-meeting, and slept in a tent. Whilst there, he was attacked with hæmoptysis, and threw up a large quantity of blood: and his expectoration was occasionally tinged with blood, until September, when I was called to see him. When I first saw him, he coughed up, in my presence, at one time, a tablespoonful of blood and mucopurulent matter. At this time he was troubled with fever, alternating with slight rigors every afternoon; night sweats; irritating cough; and pain in his head, especially when in a recumbent posture; and the disease had all the leading characters of a rapidly-progressing consumption. To use the patient's own language, his "cough had always been very loose:" this, taken in connexion with the fact that the disease, in the first place, showed itself immediately after sleeping in a damp room (and I ought to have mentioned that he had exerted himself very much in extinguishing the fire, and was in a profuse perspiration when he went to bed), induced me to consider it, notwithstanding the hæmoptysis which attended it, as a case of the catarrhal variety of consumption.

I bled him about 16 ounces, and directed nauseating doses of ipecac., opium, and calomel. The blood exhibited very slight appearances of inflammation. An antimonial plaster was applied to the chest; the ordinary expectorants were used, such as squills, antimony, digitalis, sanguinar. canadens., &c. But very little change was effected by this course during the time it was persisted in, which was about three weeks. The cough was sometimes checked for a short period, but soon returned again as bad as ever. After this course was

found to fail of success, I directed an emetic of ipecac. to be repeated every two or three days, and in the intervals, the use of opiate expectorants. This course gave some little relief, insomuch that the patient could go about the house every forenoon pretty comfortably; but still had soreness in his breast, troublesome cough, and night sweats. About this time, he was attacked suddenly with pain in his bowels, attended with a sensation of *drawing* towards the navel, incessant vomiting, and obstinate costiveness. On investigating the case, I informed the patient and his friends, that, if it were possible from any exposure to the causes of this disease, I should certainly conclude that he had the *painter's colic* (colica rhachialgiæ), but the difficulty was to know how that could have been occasioned. I however gave him pulv. opii. gr. ii., submur. hyd. sj., and ordered a like dose to be repeated every four or five hours, with the use of enemata, fomentations to the abdomen, &c.; but, at my next visit, I found he had obtained little or no relief: I ordered, at the suggestion of my friend, Dr. Finley, the addition of ol. croton tigl. to the calomel and opium. We at this visit were informed that Mr. B. had converted a *soda fount* into a *cider fount*, which had a leaden tube to conduct the cider to the counter, through which he had been in the habit of drinking cider. This at once removed the difficulty of accounting for the disease, and confirmed my first suspicions. By continuing these remedies three or four days, the obstruction of the bowels was partially removed, the vomiting somewhat abated, and the pain very sensibly lessened. By continuing the cathartics and opiates

for several days more, the disease of the bowels entirely disappeared. And this brings us to the important item in the case.

When the pain in the bowels and the vomiting were at their height, the pain in the breast, cough, and night sweats, entirely disappeared, and all the previous symptoms ceased altogether. It was rational, however, to expect that, when the disease of the bowels was removed, the lungs would return to their former condition; but, to my great surprise and gratification, the patient returned to a state of health which has continued to the present time, nearly six months, notwithstanding the winter has been very violent, and the thermometer has two or three times, in the course of the winter, changed forty degrees in twenty-four hours.

There are several important questions suggested by this case.

1st. Did the restoration of the lungs depend upon any specific effect of the lead?

2dly. Was the vomiting, attendant on the colic, efficacious in removing the pulmonary complaint?

3dly. Was it effected by counter-irritation?

4thly. Did it depend upon the conjunct influence of the whole of them?

These are questions which I think of much importance to the medical profession, and the hope of seeing them satisfactorily answered, has principally induced me to publish this case. If it should, in any way, contribute to the more successful treatment of pulmonary complaints, I shall be abundantly compensated for the little pains I have taken in placing it before the public.—*Western Journ. of Med.*

III.

CASE OF SPINAL IRRITATION.

Communicated to the Editor of the Boston Medical and Surgical Journal,

By CHARLES HUBBARD, M.D., of Winthrop, Me.

SIR,—Miss Sarah Smith, aged 25, came under my care on the 11th of January last. Under this date my notes say—She has severe and painful clonic spasms of the muscles of the glottis, lower jaw, face, neck, upper and lower extremities, with several of the muscles of the chest and trunk. Owing to the spasms of the muscles of the glottis, she frequently utters inarticulate sounds. There is great flatulence of the stomach, with a sensation like that of a cord across the epigastrium, and pains darting through the side, chest and shoulder. So large is the volume of flatus constantly arising from the stomach, that her mouth is set wide open to allow of its escape. These symptoms arise every day, and continue for some hours. They do not, however, appear periodically. She has been thus affected during the last four years. I do not learn that these symptoms were at first preceded by any derangement of the digestive organs. I am told that she has been *doctored* considerably. She has been frequently bled, puked and physicked, has had shocks from the electrical machine, and sparks by insulation. On examining the spine, I find it tender, under slight pressure, throughout its whole course. The dorsal and lumbar portions are particularly so.

Treatment.—Cupping, with scarifications, over the whole extent of the spine, to draw 3 x. of blood. Before the conclusion of the operation, she has almost entire relief from all the symptoms except the

local tenderness, which still remains. Pressure made upon different portions of the spine, will now occasion a recurrence of the spasms of the different sets of muscles. Apply a blister three inches in width to the whole spine, to be dressed with irritating cerate. Diet light and nutritious.

28th.—There are now occasional slight twitchings of the extremities, with very little flatulency. Tenderness of the spine somewhat diminished. Blister dried up. Cupping, with scarifying, to draw 3 viii. of blood from the same place. Antimonial unguent to be applied twice a day to the spine—to be discontinued if it produces much nausea.

Feb. 5th.—Still more free from the spasms, flatulence and local tenderness. There are a few pustules from the unguent, which is to be resumed.

April 1st.—Remains as well. There is much less tenderness of the spine, which is covered with pustules, which have suppurated freely, but are now encrusted with a dry thick scab. There remain only slight spasms of the lower extremities, excited by motion to walk. The right lower extremity being principally affected, I insert a seton on the right of the spine, over the inner edge of the gluteal muscle of the right side.

14th.—She is much better of the last-named symptom, and feels quite well. It will be necessary to continue an irritation over the seat of the disease for some time yet to come.

Remarks.—The above is a well-marked case of idiopathic neuralgia, implicating several sets of muscles. The irritation in the spinal cord, if it amounted to nothing more, was of a very high grade, and was ex-

tended to the neurotic ganglia along the spine. Her pulse has always been natural, her appetite good, and her bowels regular. There has been no one of the viscera affected, except the stomach, which, in addition to flatulency, has sometimes rejected food recently taken.

CHARLES HUBBARD.

Winthrop, April 15, 1831.

IV.

BREAD AND ITS VARIETIES.

For the Boston Medical and Surgical Journal.

THE substance known to us under this familiar title, constitutes that preparation of the esculent grains which affords to man the greatest amount of nourishment in the most convenient and useful form.

The farina or flour of wheat, made into a paste with water and some substance capable of producing fermentation, allowed to remain for a certain time and then baked, is found to be converted into a compound differing materially, in its sensible and chemical qualities, from the materials employed; consisting of an exterior hard, dry, sapid crust, and of an inner white elastic sponge, very porous, and possessing an odor derived from the leaven employed in its fabrication. This compound is bread. It remains soft in a damp atmosphere, dries in a warm situation, continues for a considerable time without moulding, swells on being moistened, is easily masticated, and readily submits itself to the processes of digestion.

The art of making bread is very ancient, since we know, from Scripture, that the Israelites possessed it during their sojourn in Egypt. The Egyptians are, without doubt, the first who understood and prac-

tised this important process. From them it passed to the Greeks and Romans, and has now become universal in all countries in which, by agriculture or commerce, the proper material of the fabric can be obtained.

The substance best suited for the process of making bread, is the flour of wheat, after it has been properly bolted or deprived of its bran. Where other kinds of grain are employed, a certain proportion of wheat flour must be added, in order that the result may possess that lightness and spongy texture which, if not essential to the character of good bread, are among its most desirable and attractive qualities.

The process of making bread divides itself naturally into two parts, namely, the preparation of the dough, and the baking. Dough is produced by the intimate union of flour, water, and leaven. The action of the water, as is well known, is not merely to moisten the flour; the two substances actually combine together in certain proportions, so that it is only the excess of water above this, which is evaporated in baking. In making dough of wheat flour, the quantity of water which thus unites with the flour is estimated at more than one third of its weight. The peculiar quality of the water employed seems to be unimportant, since rain, pump, or well water, answer equally well.

The third constituent of dough, leaven, may be obtained from any vegetable substance which has undergone the acetous fermentation. The dough left from a former baking, and which has become acid, will answer very well; but it is more usual, in baking on a large scale, to employ barm or yeast; a

ferment which collects on the surface of fermenting beer. When first introduced into use, the latter substance was thought by many to be prejudicial to health. This idea is long since abandoned ; but the comparative advantages of yeast and leaven in making dough are still matter of dispute. The author of a very able treatise on this subject, M. Parmentier, recommends leaven on the ground that the precise degree of its action can be calculated, so that there is less danger of the bread being rendered acid on the one hand, or becoming heavy on the other. On this same ground, Dr. Paris advises the use of yeast ; and the latter substance is employed in preference in England and this country. It is a curious fact, that yeast which has been dried, and so kept for a considerable time, will, when moistened with water, again serve for the manufacture of bread as well as the fresh article.

Dough, properly prepared by the admixture of these three articles, requires to be seasoned with a little salt, and is then subjected to the process of kneading, the effect of which is to incorporate the constituents more perfectly, and to render the mass uniform and homogeneous. That this part of the operation is not unimportant, is well known to those who possess experience on this subject. The chemical union of the flour and water seems to be facilitated by this operation. The water which is added during the process, in place of rendering the dough more moist, is found to impart to it tenacity and consistence. In an economical view, therefore, and as tending to produce the end proposed by the least possible means, it ought by no means to be neglected.

After this process, the dough is left to itself, that the rising or fermentation may go on without interruption. The time required for the completion of this process, varies with the temperature to which it is exposed. At that of summer heat, which is as high a temperature as can advantageously be employed, the time required is about five hours. At the end of this time, the dough is divided into loaves, and transferred to the oven. The degree of heat which is best suited for baking bread, is stated by Mr. Donovan at 448 deg. Fahr. In the best constructed ovens, this temperature is uniformly maintained by means of air flues from a furnace. Newly baked bread possesses a peculiar odor and taste, which are lost by keeping.

The chemical changes which take place during the process of making bread, are still but imperfectly explained. The most interesting part, namely, the fermentation, which occurs when the leaven is added, is accompanied by the extrication of carbonic acid gas, which, by separating the particles of the dough from each other, produces those eyes or cells which give to the bread its spongy texture, and, while it renders it specifically lighter, imparts to it also an increased fitness to be digested and animalized. As a general principle, the more perfectly bread has *risen*, provided it remains sweet, the lighter and more digestible will it become. Now wheat flour is particularly fitted for the perfection of this process, since the gluten, which enters more largely into its composition than that of any of the farinas, serves, by its tenacious property, to detain the gas, and thus to assist in the formation of the cavities alluded to. Deprived

of its gluten, though it would continue to be a highly nutritious compound, and would serve the purpose of many culinary products, its property of making good bread would be wholly destroyed.

The conclusion just mentioned is amply confirmed by the numerous and varied experiments which have been made in the manufacture of this important article. Of the various substances which have been employed in the fabrication of bread, those only answer alone, into whose composition this element enters; and in those which contain it, the lightness and excellence of the bread procured from each, is in proportion to the amount in which this constituent exists. This and other circumstances of difference in the several kinds of bread, may render it interesting to give a description of some of the principal varieties, preceded by a synoptic view of the composition of the substances which form their bases, by which it may be judged whether the correspondence adverted to actually takes place.

Table of the Proportions of Gluten and Starch in several Farinas, expressed in hundredth parts.

	Starch.	Gluten.	Other const's.
Wheat,	75	12	13
Maize,	—	0	—
Rye,	60	8	32
Barley,	32	3	65
Oats,	59	6	35

A comparison of the varieties of bread furnished by the above articles, will form the subject of a future number.

MEDICAL JOURNAL.

BOSTON, MAY 10, 1831.

THE NEW MEDICINES.

WE have read with great pleasure a work recently published in England, illustrating the efficacy of those articles of the materia medica which are generally known by the name of the new remedies. The work alluded to, contains an account of the observations of Dr. Bardsley at the Manchester Infirmary, an Institution which offers remarkable facilities for accurate medical experiments, and the extent of which may be estimated from the fact, that, in a single year, 16680 patients enjoyed the benefits of treatment at that extensive charity.

Besides the great number of cases in which the remedies in question have been tried by Dr. B., there is one fact concerning his book which adds greatly to its value,—he has recorded faithfully the instances in which his medicines have done harm, and failed to do good, as well as those in which they have proved curative. His conclusions, too, are marked by much impartiality and sound judgment, evidently showing that his sole object has been to arrive at the truth, and fairly to state it to the profession.

Included in the volume are statements of the result of different modes of treatment in Chorea and Diabetes, and some very important facts respecting the use of the *Sulphur Bath* in cutaneous and some other diseases. These facts tend to impress

the practitioner with a higher sense of the claims of this remedy to general use, than has been heretofore entertained.

The foregoing remarks will explain to the reader our reasons for desiring to place him in possession of the results of Dr. Bardsley's observations on the use, both of the new remedies, and of sulphur fumigation. We propose, therefore, to offer, in several succeeding numbers of this Journal, a concise explicit account of all these remedies in the hands of Dr. B., and such other practical hints as are contained in his work, or suggested by its perusal.

TEMPERATURE OF PLANTS.

NUMEROUS observations conspire to prove, that plants, like animals, possess a temperature independent of the medium by which they are surrounded. This is indeed sufficiently shown by the fact, that vegetable life will continue, and the circulation of sap be maintained, at temperatures much below the point of freezing. A familiar illustration of the same principle is furnished by the phenomenon, that when a fall of snow occurs early in spring, it melts immediately on coming in contact with the surfaces of trees and shrubs, in which the sap has begun to ascend. It has also been remarked that this phenomenon would occur over a considerable space around the trunks of trees, &c.; an effect obviously due, not to the conduction of heat, but to its radiation from the bark and foliage. A very simple experiment on this subject, was made by a gentleman in Southampton, Eng.,

in February last, which, though it furnishes no sufficient ground for any positive inference, is well worth repeating. The temperature of the atmosphere was 32 deg. Fahr., and the snow was thickly scattered. On placing the thermometer under the shade of a small cedar tree, it rose in twenty minutes nearly two degrees. On being placed under a boxwood tree, round which the snow was also dissolved, but less perfectly, the mercury stood at 33 1-2. On repeating the experiment under another tree, the *rododendron chrysanthemum*, it fell to 32 1-2, being only half a degree above the freezing point. The observer attributed this difference to the variety in the amount of the foliage, and to the different radiating power of the leaves, which he thinks corresponds with the variety in the color. In the cedar, for instance, which produced the highest temperature, the color of the leaves was of a dark green, while that of both the others was much lighter; whereas in these, although the color was nearly similar, the quantity of foliage differed very considerably, the amount on the box tree being much greater than that of the *chrysanthemum*. In assigning this explanation, it is evidently taken for granted, that the temperature of the different plants is equally elevated, and that the differences observed depend only on circumstances which regulate the communication of heat; and this opinion, it must be confessed, is highly probable.

THE PRESENT PROSPECTS OF THE FACULTY.

WHAT excuse has a man for being sick in these days of Prophylactics. The Journal of Health has a circulation almost unequalled in extent by any other periodical in the country, and it is filled with rules and regulations for keeping out of the hands of the Doctor. There is just published at Philadelphia, a work entitled "The Catechism of Health," consisting of two parts, and treating of Health, Infancy, Childhood, Air, Exercise, Sleep, Food, Drinks, Tobacco, Personal Cleanliness, Clothing, Preservation of the External Organs of Sense, Injury from Lightning, Means of avoiding the Effects of Cold and Dampness, Means of securing the Beauty and Symmetry of the Body, and Miscellaneous Particulars;—of the Occupations for the first Hours of the Day, Breakfast, Forenoon Luncheon, Dinner, Animal Food, Vegetable Food, Dessert, Fruit, Liquors, Afternoon, Tea, Evening, Supper, and the Passions. Besides this, there is shortly to be issued from the same office, the 1st of a series entitled "The Family Library of Health."—What with all these, clean streets, the rage for travelling, temperance societies, and, above all, vaccination, the prospects of the Faculty are appalling. But it is truly delightful to see our medical schools filling up so rapidly, for misery loves nothing better than company.

MEDICO-CHIRURGICAL BULLETIN.

A NEW Medical Journal is commenced at New York, with the

above title: it is edited by George Bushe, M.D., who, we believe, is a foreigner. His "Bulletin" is to be published *monthly*; each number to contain 48 pages (or 3 sheets), and the subscription price is 5 dollars a year. This is probably as low as it can be afforded, although we are obliged to furnish our subscribers 4 and sometimes 5 sheets a month, for only 3 dollars a year. The 1st No., issued at the commencement of the present month, appears to exhibit considerable research, and we hope Dr. B. will succeed in his attempts to enlighten the profession. It is to this work we are indebted for the article on Congenital Hydrocephalus, which will be found in our columns this day.

LONDON UNIVERSITY.

SCENES of a very novel and curious description, says the Editor of the Medical Gazette, have lately taken place at this Institution. There had for some time been evidence of a gathering storm—squalls were alternated with the stillness of expectation, till it became apparent that the atmosphere of the anatomical classroom was charged with elements that could not be permanently tranquillized without an explosion. This took place on Wednesday, the 16th inst. On Mr. Pattison making his appearance, he was received by those present with sounds of the most opposite description. His friends were ranged below, his foes above, and a regular contest for the mastery ensued. The former applauded, the latter hissed; and for a moment the cheering seemed to preponderate, till the opponents of the Professor, abandoning their inarticulate mode of denunciation, began to utter cries of "*Off, off!—no lecture,*" &c., when their superiority over his sup-

porters soon became manifest, both as to numbers and zeal. A more extraordinary performance than that which followed, was probably never before witnessed within the walls of any establishment devoted to science. The Professor bowed, and was about to commence his lecture, but "off, off," resounded from all sides, and his voice was drowned in the din. The "subject" for demonstration was then brought in, but the dead and the living were treated with equal disrespect, and it seemed as if nothing could have increased the uproar, till at length a side-door opened, and Mr. Horner, the warden, entered. His office having for its especial object the maintenance of order, he proceeded, in the discharge of his duty, to address the students. It was now confusion worse confounded; the noise and clamor, and determined purpose of overwhelming his voice, became deafening. He attempted by every means to gain a hearing, but the attempt was in vain; the opposition to him appeared, if possible, more violent than that directed against Mr. Pattison. The drama was not yet ended, for behold the door opened once again, when three members of the Council, headed by Lord King, presented themselves. His Lordship, with looks and gestures as indicative of humble entreaty as those practised by John Kemble during the O. P. rows at Covent Garden, now came forward, and, laying his hand upon his heart, in dumb show supplicated a hearing. For some time it was doubtful whether he would succeed any better than the warden, but at length having obtained a moment's pause, his Lordship put it to the students, as men of honor and feeling, to suffer the lecturer to proceed; assuring them that any representation they might send to the Council would be immediately attended to. Here his assertion was met by a declaration from one of the pupils, who instantly

rose and stated that the class had already sent in a remonstrance which had not met with attention. Lord K. asseverated that this should not occur again; but the thread of his discourse, once broken, was not so easily resumed. Clamor again prevailed, and his lordship, with the whole of his party, were ultimately obliged to retire, leaving the pupils triumphant, and affording an excellent illustration of collegiate discipline. To make the matter complete, the lectures were suspended, and we understand that a *verbatim* copy of the former paper was sent in to the Council by the pupils, who have thus taken Lord King at his word.

On Monday last the theatre was opened again, when it was stated, by one of the pupils, that the "Committee" had agreed that there should be no further expression of disapprobation manifested against Mr. Pattison at present,—an announcement obviously comprehending an acknowledgment that the previous disturbance and interruption of the lectures had been the result of an organized plan. The Professor soon after entered, and in a subdued tone, and with the appearance of a man oppressed by deep emotion, said, that after the interruption which the course had met with, it became impossible for him to resume the thread of his discourse at the point at which it had been broken; he should, therefore, direct their attention to a new subject. He then proceeded to demonstrate the surgical anatomy of the arteries of the lower extremity, and, we must say, went through his task without betraying any of that confusion, carelessness, or inaccuracy, of which he has been accused.

New College of Medicine.—The Editor of the London Medical Gazette ironically remarks, that the whole profession will learn, with

pride and gratification, that a new Medical College is to be established, in which all abuses of every kind are to be done away. It is to be founded on the most enlarged, liberal, and gentlemanly principles; and all practitioners, whether "physicians, surgeons, or apothecaries, will be associated upon equal terms—will enjoy equal rights, and will be recognised by the same title!!!"

The whole of the appointments have not yet taken place, but the following, which have been handed to us, are quite sufficient guarantees to the public of the respectability of the establishment, while they will at once convince the profession of the high rank which the new College must immediately take among the scientific institutions of Great Britain:—

President, Mr. Wakley; *Vice President*, Mr. King; *Treasurers*, Mr. Dermot, Mr. Sleight; *Secretary*, Mr. M'Christie; *Confrères*, Dr. Morson, Mr. G. Walker, Mr. Waller, Mr. Complin, Mr. Bowen, Dr. Ramadge, Dr. G. Smith, Mr. D. O. Edwards, and several young gentlemen attending lectures in London; *Corresponding Members*, Dr. Jacob, Dublin, Dr. M'Intosh, Edinburgh; *Beadle*, Michael Kearney (F. 21).

English Naval Surgeons.—The order by which the Surgeons of the British Navy were excluded from the King's levees, and which we stated to have probably originated in a mistake, has been annulled.

Parisian Medical Intelligence.—The contest for the chair of *Physique Medicale* has terminated in favor of M. Pelletan, a circumstance which has given much satisfaction to the medical world of the French metropolis. M. Pelletan was formerly a professor belonging to the *Faculté*, but lost his chair in consequence of the obnoxious ordinances of the Frassinous administration. It

certainly redounds much to his credit, that his desire to connect himself once more with the *Ecole de Médecine*, has been backed by the ability and courage to enter into contest with younger competitors, and still more so, by the good fortune to come off victorious. His display of talent during the *Concours*, has been marked by a singular clearness and admirable precision; and on every subject he showed himself a perfect master. Of the six candidates who entered the lists with him, only two remained to dispute with him the palm; and of these two, M. Person is said to have acquitted himself in the next best manner.

The *Concours* for the chair of *Pathologie Externe*, was begun on the first of March. Eleven candidates started, but two of them retired after their first day's experience. Among those who contend for this professorship, we observe the names of Cloquet, Sanson, Berard, Blandin, Velpeau, and Petit.

On the 4th of next month, another *Concours* will be opened, for the disposal of the chair of *Histoire Naturelle Medicale*: and this, it is supposed, will conclude the combined labors of the *Faculté* and the *Institute*.

On Improvement in Black Writing Ink; by John Bostock, M.D. F.R.S., &c.—(Transactions of the Society of Arts of London.)—The changes which tend the most to impair the value of ink, are its moulding, the separation of the black matter from the fluid, and its loss of color,—the black first changing to brown, and then disappearing. The author considers the gallic acid to be the only part of the solution of the gall nut, which is essentially concerned in the production of permanent black ink, and that the tan, the mucilage, and the extractive matter, are the causes of its deterioration. The moulding is considered as arising from the mucilage, and the pre-

cipitation to be chiefly occasioned by the extractive matter. The tan, it is conjectured, forms a triple compound, in the first instance, with gallic acid and the iron; and that in consequence of the decomposition of the tan, this compound is afterwards destroyed.

The practical conclusions, says the author, that I think myself warranted in drawing from these experiments, are as follows:—In order to procure an ink which may be little disposed either to mould or to deposit its contents, and which, at the same time, may possess a deep black color, not liable to fade, the galls should be macerated for some hours in hot water, and the fluid be filtered; it should then be exposed, for about sixteen days, to a warm atmosphere, when any mould that may have been produced must be removed. A solution of sulphate of iron must be employed, which has also been exposed for some time to the atmosphere, and which, consequently, contains a certain quantity of the red oxide of iron diffused through it. I should recommend the infusion of galls to be made of considerably greater strength than is generally directed; and I believe that an ink, formed in this manner, will not necessarily require the addition of any mucilaginous substance to render it of a proper consistence.

I have only farther to add, that one of the best substances for diluting ink, if it be, in the first instance, too thick for use, or afterwards becomes so by evaporation, is a strong decoction of coffee, which appears, in no respect, to promote the decomposition of the ink, while it improves its color, and gives it an additional lustre.—*Jameson's Journal.*

The Seat of Taste.—By covering the tongue with parchment, sometimes in whole, and sometimes in different parts, it has been determined by two experimenters in Paris, MM. Guyot and Admyraula, that the end and sides of the tongue, and a small space at the root of it, together with a small surface at the anterior and superior part of the roof of the palate, are the only portions of surface in the cavity of the mouth and throat, that can distinguish taste or sapidity from mere touch. A portion of extract of aloes, placed on any other part, gives no sensation but that of touch, until the saliva carries a solution of the sapid matters to those parts of the cavity.

Whole number of deaths in Boston the week ending April 29th, 17. Males, 8—Females, 8. Stillborn, 1.

Of consumption, 2—smallpox, 1—croup, 1—dropsy on the brain, 1—old age, 1—quinsy, 1—unknown, 3—lung fever, 1—fits, 1—inflammation of bowels, 1—infantile, 1—inflammation, 1.

ADVERTISEMENTS.

GREAT SYMPATHETIC NERVE. By J. P. Manec, D.M.P., Lecturer on Anatomy and Operative Surgery at Paris. Translated and Corrected by J. Pancoast, M.D. This day received by CARTER, HENDEE & BABCOCK. May 10.

THOMSON ON INFLAMMATION. This day received by CARTER, HENDEE & BABCOCK, Lectures on Inflammation, exhibiting a View of the General Doctrines, Pathological and Practical, of Medical Surgery. By John Thomson, M.D., F.R.S.E., Professor of Surgery to the Royal College, &c. 2d American from the last London Edition. May 10.

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